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TITLE: Electrode for lithium secondary battery

INVENTOR: HASEZAKI, K; MOTOMURA, H

PATENT-ASSIGNEE: MITSUBISHI HEAVY IND CO LTD (MITO), MITSUBISHI JUKOGYO KK (MITO)

PRIORITY-DATA: 1997JP-0277072 (October 9, 1997)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
DE 19846408 A1	April 15, 1999		009	H01M004/62
JP 11121011 A	April 30, 1999		007	H01M004/62
US 6114062 A	September 5, 2000		000	H01M004/60
DE 19846408 C2	August 16, 2001		000	H01M004/62

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
DE 19846408A1	October 8, 1998	1998DE-1046408	
JP 11121011A	October 9, 1997	1997JP-0277072	
US 6114062A	September 17, 1998	1998US-0154729	
DE 19846408C2	October 8, 1998	1998DE-1046408	

INT-CL (IPC): C08 F 36/20; C09 J 4/00; H01 M 4/02; H01 M 4/48; H01 M 4/60; H01 M 4/62; H01 M 10/40

ABSTRACTED-PUB-NO: DE 19846408A

BASIC-ABSTRACT:

NOVELTY - An electrode for lithium secondary batteries comprises an active electrode material and a binder consisting of a bis-allyl-nadi-imide or allyl-nadi-imide compound, i.e. a water-dispersible, addition-polymerisable, low molecular weight imide monomer.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for

(a) the production of the electrode by coating the surface of a collector with an aqueous slurry containing powdered electrode material and binder, drying the mixture and heating at 100-500 deg. C for 1 hour or more; and

(b) lithium secondary batteries with the above components, particularly batteries in which the same type of imide-based binder as above is used for both the cathode material and the anode material.

USE - In lithium secondary batteries for the storage of electrical energy.ADVANTAGE - The use of special allyl-nadi-imide binders enables the production of electrodes with a high level of bonding between particles of electrode material and

between the particles and the metallic collector, without using organic solvents (unlike prior-art PVdF binders etc.)

ABSTRACTED-PUB-NO: US 6114062A

EQUIVALENT-ABSTRACTS:

NOVELTY - An electrode for lithium secondary batteries comprises an active electrode material and a binder consisting of a bis-allyl-nadi-imide or allyl-nadi-imide compound, i.e. a water-dispersible, addition-polymerisable, low molecular weight imide monomer.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for

(a) the production of the electrode by coating the surface of a collector with an aqueous slurry containing powdered electrode material and binder, drying the mixture and heating at 100-500 deg. C for 1 hour or more; and

(b) lithium secondary batteries with the above components, particularly batteries in which the same type of imide-based binder as above is used for both the cathode material and the anode material.

USE - In lithium secondary batteries for the storage of electrical energy.

ADVANTAGE - The use of special allyl-nadi-imide binders enables the production of electrodes with a high level of bonding between particles of electrode material and between the particles and the metallic collector, without using organic solvents (unlike prior-art PVdF binders etc.)

CHOSEN-DRAWING: Dwg.0/8

DERWENT-CLASS: A12 A85 E13 L03 X16

CPI-CODES: A04-A03; A04-B; A12-E06A; E06-D13; L03-E01B9;

EPI-CODES: X16-B01F1; X16-E01C1; X16-E09;